

**MULTIMEDIA**



**UNIVERSITY**

**STUDENT ID NO**

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# MULTIMEDIA UNIVERSITY

## FINAL EXAMINATION

**TRIMESTER 2, 2020/2021**

### **BAC3684 – SECURITY INVESTMENTS AND PORTFOLIO MANAGEMENT**

(All Sections/Groups)

13<sup>TH</sup> MARCH 2021  
09.00a.m–12.00p.m  
(3 Hours)

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#### **INSTRUCTIONS TO STUDENT**

1. This question paper consists of 4 pages with 4 questions only.
2. Attempt **ALL** questions. All questions carry equal marks and the distribution of the marks for each question is given.
3. Please write all your answers in the Answer Booklet provided.

**QUESTION 1**

- A. Peter Jackson currently has RM250,000 and is contemplating investing his money in shares. He approaches a financial planner of AIIMAN Asset Management Berhad for obtaining advice. He eventually receives the shortlisted list of two potential shares, TOPGLOV (7113) - Top Glove Corporation Berhad and PCHEM (5183) - Petronas Chemicals Group Berhad as possible share investment. The following data of both shares were provided by the financial planner.

**Show all your working steps.**

State of Economy	Probability of Occurrence	Rate of Return TOPGLOV (7113) (%)	Rate of Return PCHEM (5183) (%)
Boom	0.3	20	34
Normal	0.5	9	14
Recession	0.2	7	-21

- Compute the expected return and standard deviation of both stocks.  
(10 marks)
- Calculate the covariance and correlation between the two shares.  
(5 marks)
- Compute the expected return and standard deviation of Peter's portfolio consisting of 60,000 shares of TOPGLOV (7113), recently selling at RM10 each and 100,000 shares of PCHEM (5183), currently selling at RM2.50 each.  
(8 marks)
- If Peter is a risk-averse investor who could invest his money either in TOPGLOV (7113) or PCHEM (5183) only, or the portfolio in part (iii), which alternative should he select? Justify your answer.  
(2 marks)

(Total: 25 marks)

**QUESTION 2**

- A. Leweko Resources Berhad has shown its financial performance from 2016 to 2021 as in the following table:

**Continued ...**

Year (t)	End of Year Price (P <sub>t</sub> )	The Calendar Year Dividends (D <sub>t</sub> )	Total Return (%)	Index Value
2016	RM85.70	RM6.60	- 40.10	13.59
2017	RM74.40	RM5.25	-11.20	21.45
2018	RM97.70	RM9.30	12.60	8.12
2019	RM129.90	RM8.72	23.20	6.89
2020	RM230.30	RM6.36	-16.80	9.5
2021	RM276.40	RM12.28	32.60	17.18

Alan intends to buy LEWEKO (8745) and finds you to calculate the arithmetic mean and the geometric mean for this share from 2017 to 2021.

**Show all your working steps.**

(5 marks)

- B. Portfolio managers and investors strive to achieve the best possible trade-off between risk and return, one of the tools they use is constructing mean-variance efficient portfolios.

Discuss the concept of efficient portfolios.

(6 marks)

- C. Mtouch Technology Berhad (MTB) currently sells at RM32 per share and its latest 12 months earnings are RM4 per share with a dividend payout of 50 percent. You are keen to buy MTOUCHE (0092) with 2 lots.

**Show all your working steps.**

- i. Calculate MTB's current price-to-earnings ratio.

(2.5 marks)

**Continued ...**

- ii. If you expect earnings to grow by 10 percent a year, compute the projected price for next year if the price-to-earnings ratio remains unchanged.  
(4.5 marks)
- iii. You analyse the data and estimate that the firm's payout ratio will remain the same. Assume that the expected growth rate of dividends is 10 percent and you have a required rate of return of 16 percent, would this stock be a good buy? Explain your answer.  
(5 marks)
- iv. If interest rates are expected to decline, describe the likely effect on MTB's price-to-earnings ratio.  
(2 marks)

(Total: 25 marks)

### **QUESTION 3**

- A. You cannot become proficient in analysing sectors and industries unless you devote substantial time and effort to the task. However, learning the basics of such an analysis is certainly beneficial for the management of a portfolio.  
Discuss how the industry life cycle might be useful to an investor doing industry analysis.  
(10 marks)
- B. Bolton Corporation reported earnings per share of RM2.40 in 2020 and paid dividends per share of RM1.06. The earnings had grown 7.5 percent a year over the prior six years and were expected to grow 6 percent a year in the long-term, beginning in 2021. The stock had a beta of 1.05 and traded for 10 times earnings. The risk free rate is estimated at 7 percent and the market risk premium is 5.5 percent.  
**Show all your working steps.**
  - i. Compute the price-to-earnings ratio for Bolton Corporation.  
(6 marks)
  - ii. Calculate the long-term growth rate that is implied in the firm's current price-to-earnings ratio.  
(2 marks)
- C. Evaluate the following statement: "My mutual fund has outperformed the market for the last four years. How can the market be efficient?" Justify your answer.  
(4 marks)

**Continued ...**

- D. The recognised importance of the economy in investment management manifests itself in the widespread use of the top-down approach to security analysis.  
Discuss the implications of a negatively sloped yield curve for earnings growth and for the economy as a whole.

(3 marks)

(Total: 25 marks)

#### **QUESTION 4**

- A. Amelia is planning to invest her money in bonds issued by Gamuda Berhad. The following information was given to her by her broker:

Maturity	20 years
Coupon rate	10 percent
Par value	RM100

- i. Calculate the investment value of this bond if other bonds of the similar quality give 9 percent yield.

(2 marks)

- ii. Compute the current yield and the yield to maturity if the bonds are currently trading at RM105 in the market.

(3.5 marks)

- B. On a rational economic basis, explain why the study of chart patterns is likely to be an unrewarding activity.

(7 marks)

- C. Recently, Emily won a lottery with the amount of RM50,000. She quickly bought a share of LUSTER (5068) from Luster Industries Berhad in Malaysian Stock Market at the price of RM50 last month. In this month, she sold a call option at RM5 with a strike price of RM75.

Compute her profit when she notices that the share price of LUSTER (5068) is displayed as follows:

- i. RM25

(5 marks)

- ii. RM96

(5 marks)

- D. Explain why you agree or disagree with the following statement: “One difference between futures and forward contracts is that futures contracts are marked to market while forward contracts are not.” Justify your answer.

(2.5 marks)

(Total: 25 marks)

**End of Page**